

FIG. 1

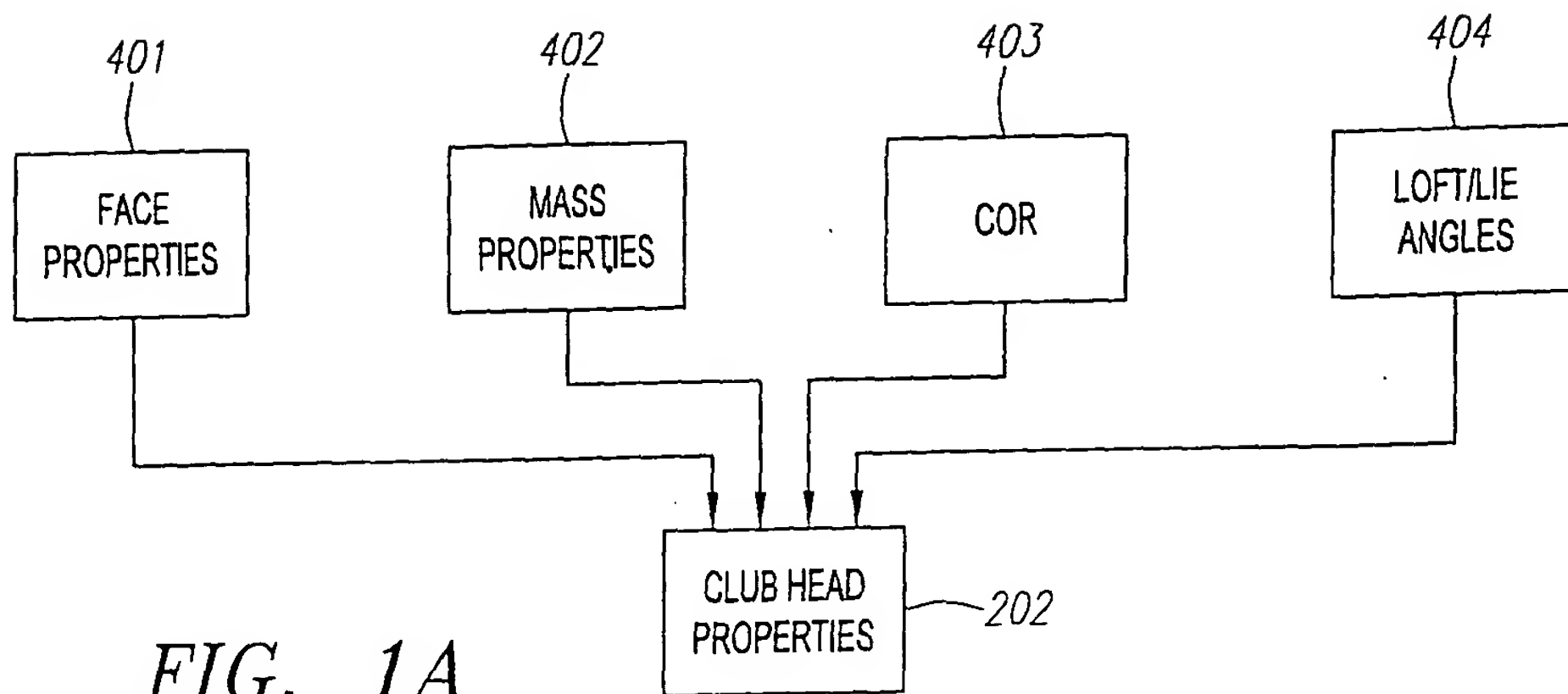


FIG. 1A

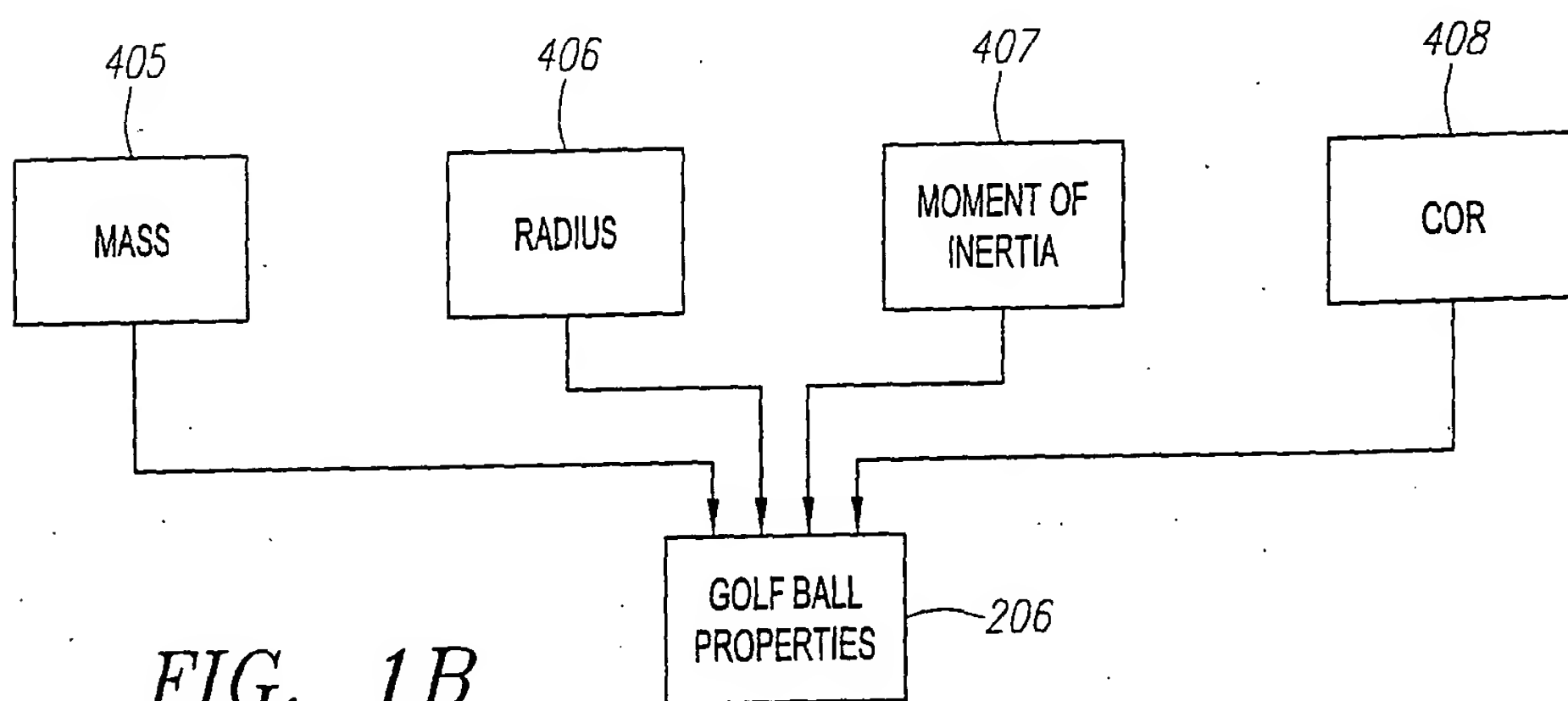


FIG. 1B

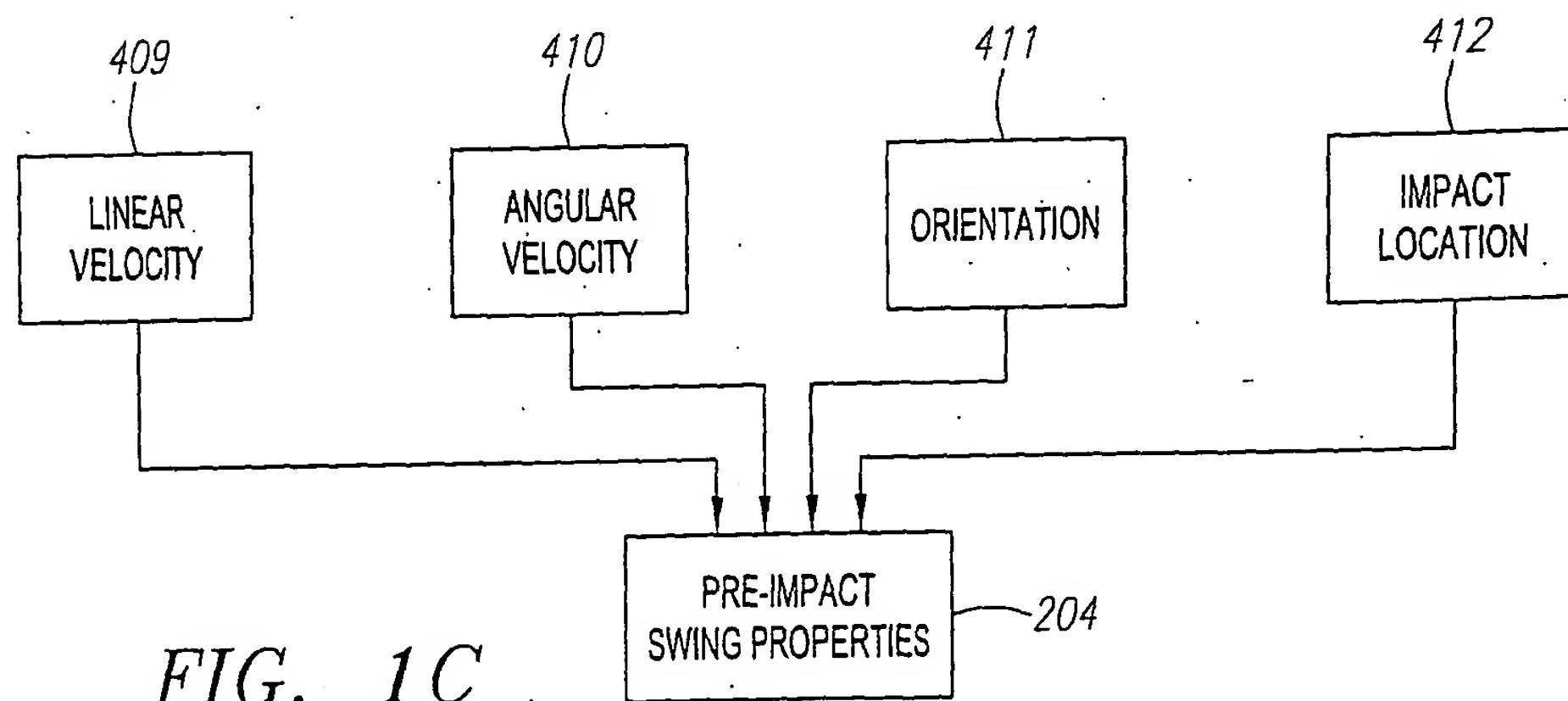


FIG. 1C

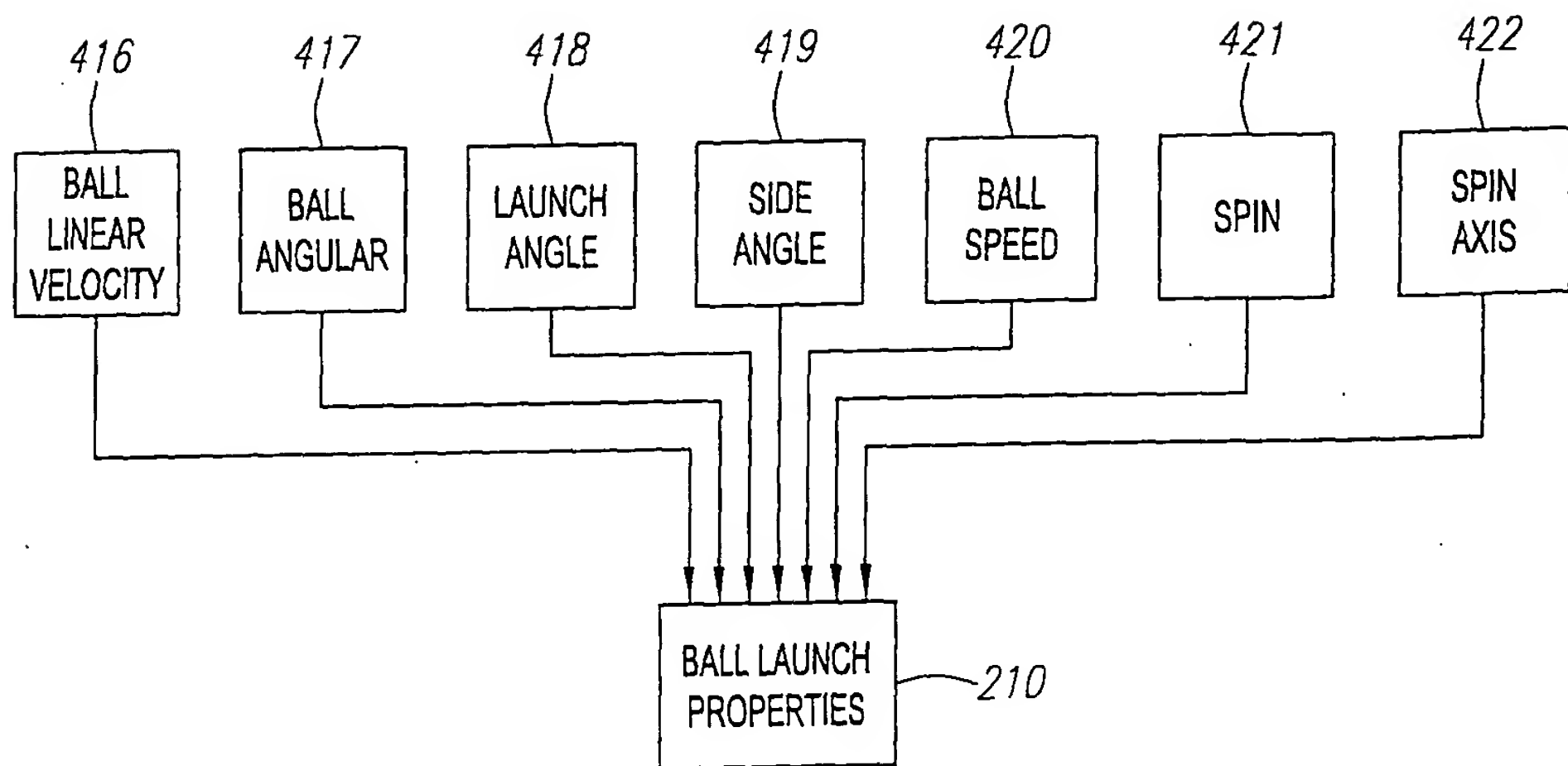


FIG. 1D

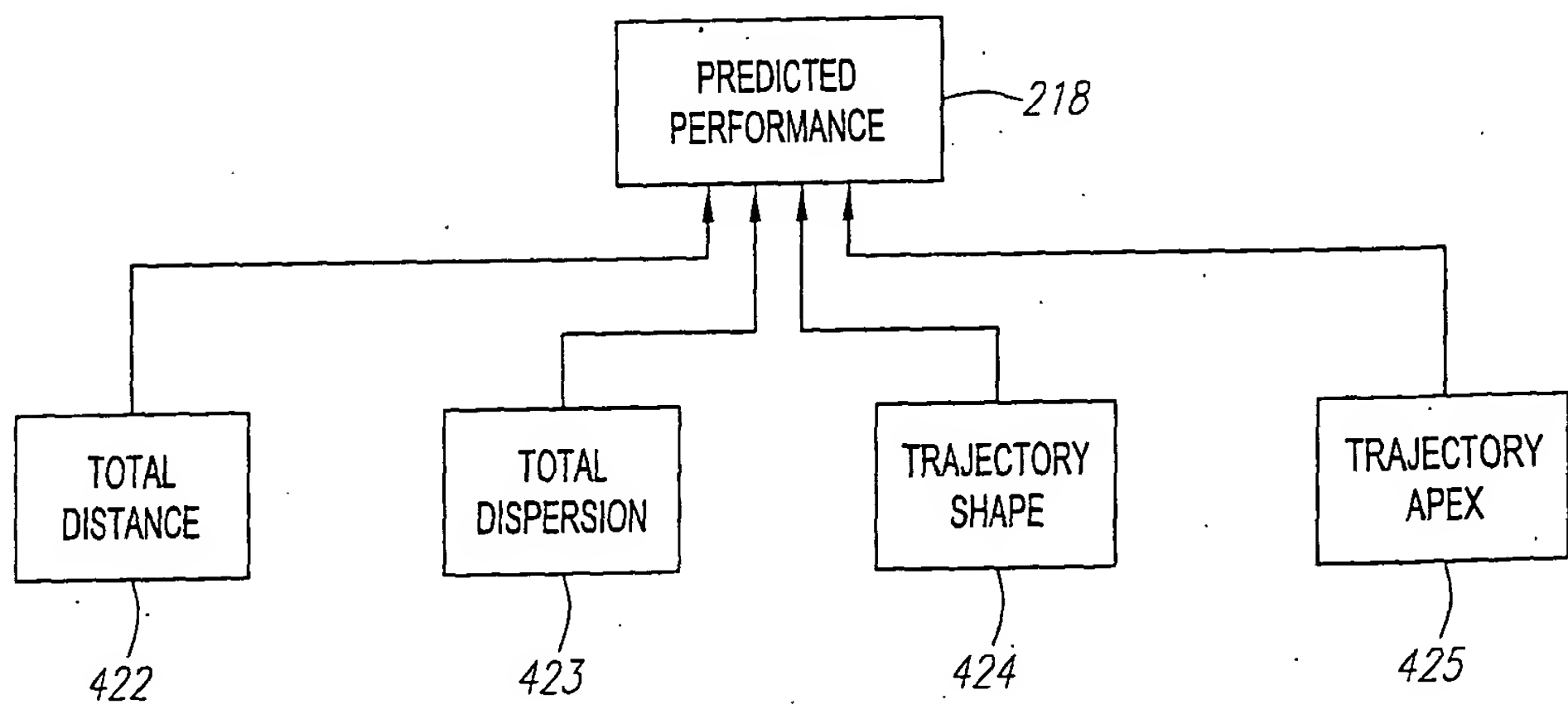


FIG. 1E

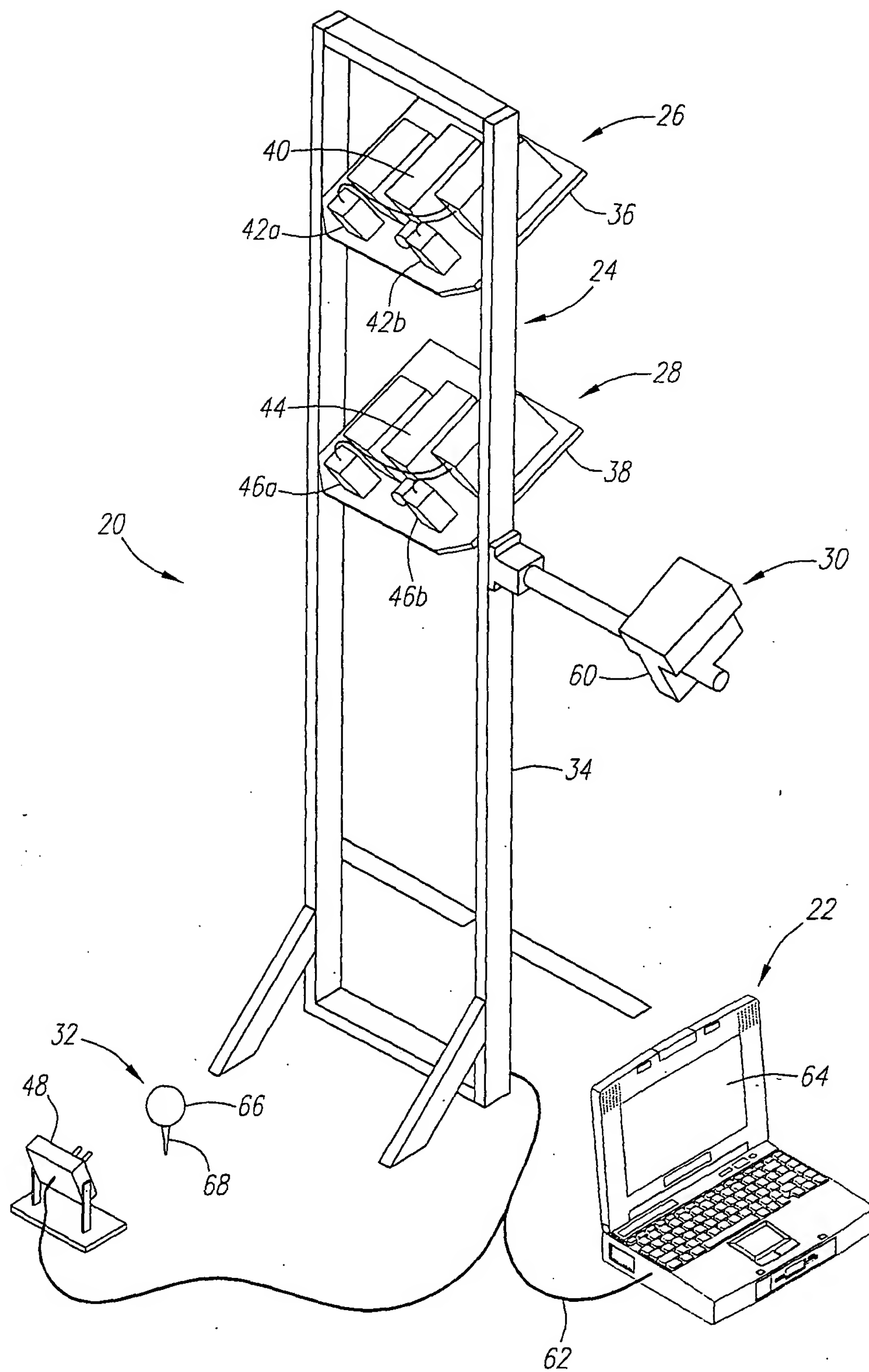


FIG. 2

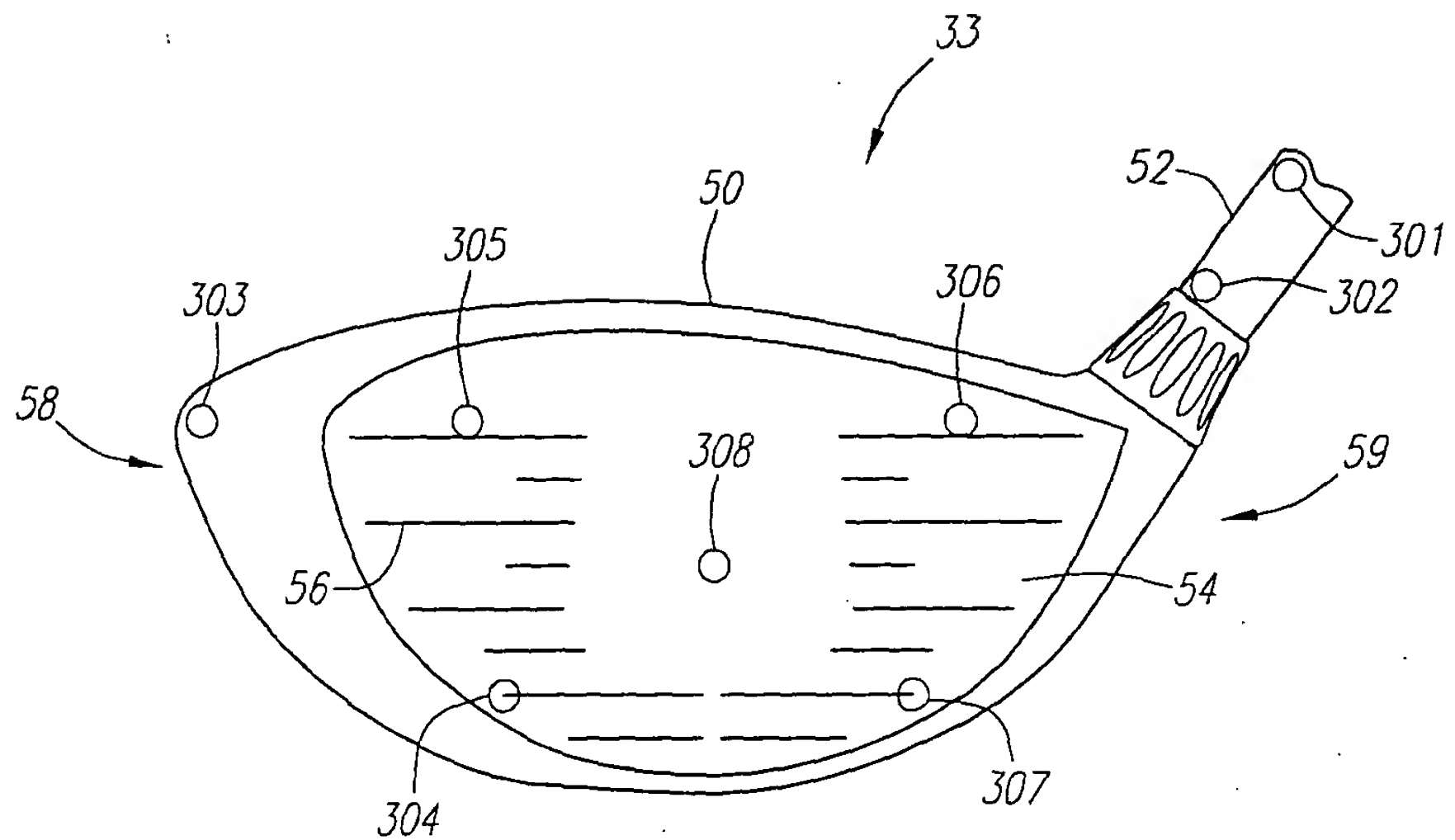


FIG. 3

POINT	WORLD X	WORLD Y	WORLD Z	ERROR	DISTANCE	CamO X	CamO Y
301	-86.762	-61.571	-288.862	0.347	0.000	350.000	657.000
302	-74.308	-53.481	-317.631	0.084	0.000	332.000	708.000
303	16.055	4.874	-342.577	0.051	0.000	175.000	782.000
304	-26.932	3.129	-371.397	0.146	0.000	254.000	825.000
305	-19.786	3.871	-343.333	0.021	0.000	238.000	779.000
306	-64.463	-31.024	-339.310	0.140	0.000	317.000	753.000
307	-66.308	-27.403	-367.273	0.023	0.000	323.000	800.000
308	-44.758	-11.521	-354.379	0.108	0.000	284.000	788.000

FIG. 3A



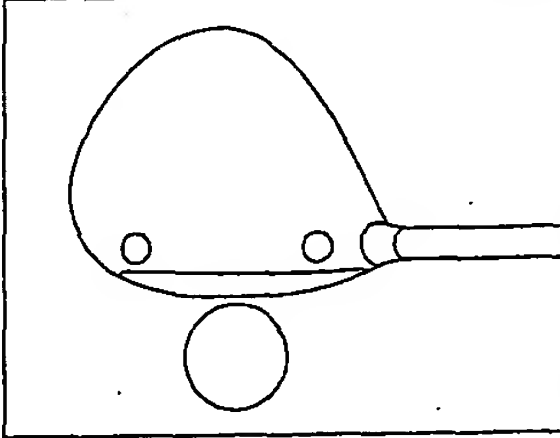
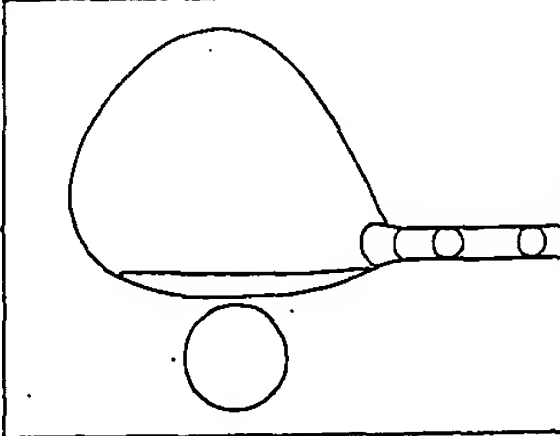
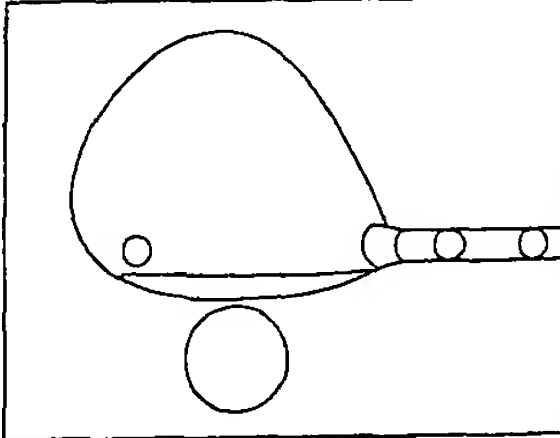
CLUB HEAD PARAMETERS	
<div style="display: flex; justify-content: space-between; border-bottom: 1px solid black; margin-bottom: 10px;"> <span>CLUB FILTER 1</span> <span>CLUB FILTER 2</span> </div> <div style="margin-bottom: 10px;"> <input checked="" type="checkbox"/> CHECK 2D MARKER SIZE (PIXELS)         </div> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">             MAXIMUM  <input style="width: 50px;" type="text" value="60"/> </div> <div style="text-align: center;">             MINIMUM  <input style="width: 50px;" type="text" value="1"/> </div> <div style="text-align: center;">             DEFAULT  <input style="width: 50px;" type="text"/> </div> </div> <div style="border: 1px solid black; padding: 10px; margin-top: 10px;"> <p style="text-align: center; margin-bottom: 10px;">CHOOSE CLUBHEAD MARKER ORIENTATION</p> <div style="display: flex; justify-content: space-around; align-items: center;">    </div> <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <span><input type="radio"/> TWO ON CLUBHEAD</span> <span><input type="radio"/> TWO ON SHAFT</span> <span><input type="radio"/> TWO ON SHAFT + ONE TOE</span> </div> </div>	<div style="margin-top: 10px;"> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">             THRESHOLD SETTING (GREY SCALE)   <input style="width: 50px;" type="text" value="125"/> <span style="float: right; border: 1px solid black; padding: 2px 5px;">DEFAULT</span> </div> </div> <div style="margin-top: 20px;"> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">             NUMBER OF CLUBHEAD EXPOSURES   <div style="display: flex; align-items: center; justify-content: center;"> <input style="width: 50px; height: 20px;" type="text" value="6"/> </div> <div style="font-size: small; margin-top: 5px;">MIN = 8    MAX = 9</div> </div> </div> <div style="margin-top: 20px;"> <input checked="" type="checkbox"/> USE RIGID RELATIONSHIPS BETWEEN MARKERS (RBC)         </div> <div style="margin-top: 20px; display: flex; justify-content: flex-end; gap: 10px;"> <div style="text-align: center;">             HOR. SEP.  <input style="width: 50px;" type="text" value="80"/> <span style="font-size: x-small;">BOX SETUP</span> </div> <div style="text-align: center;">             VERT. SEP.  <input style="width: 50px;" type="text" value="60"/> <span style="font-size: x-small;">DEFAULT</span> </div> </div>
<div style="display: flex; justify-content: space-around; margin-top: 10px;"> <span>OK</span> <span>CANCEL</span> <span>APPLY</span> </div>	

FIG. 5

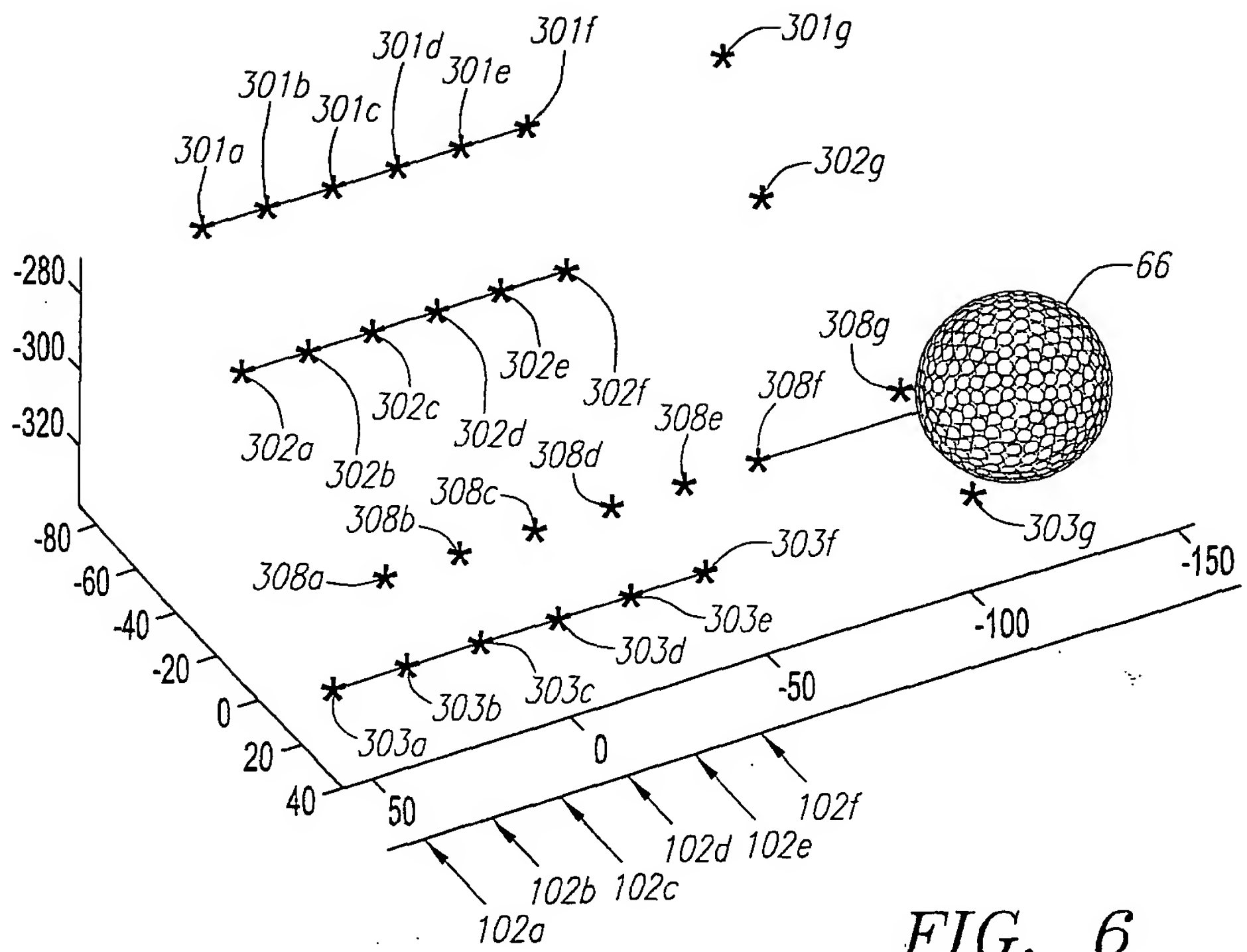


FIG. 6

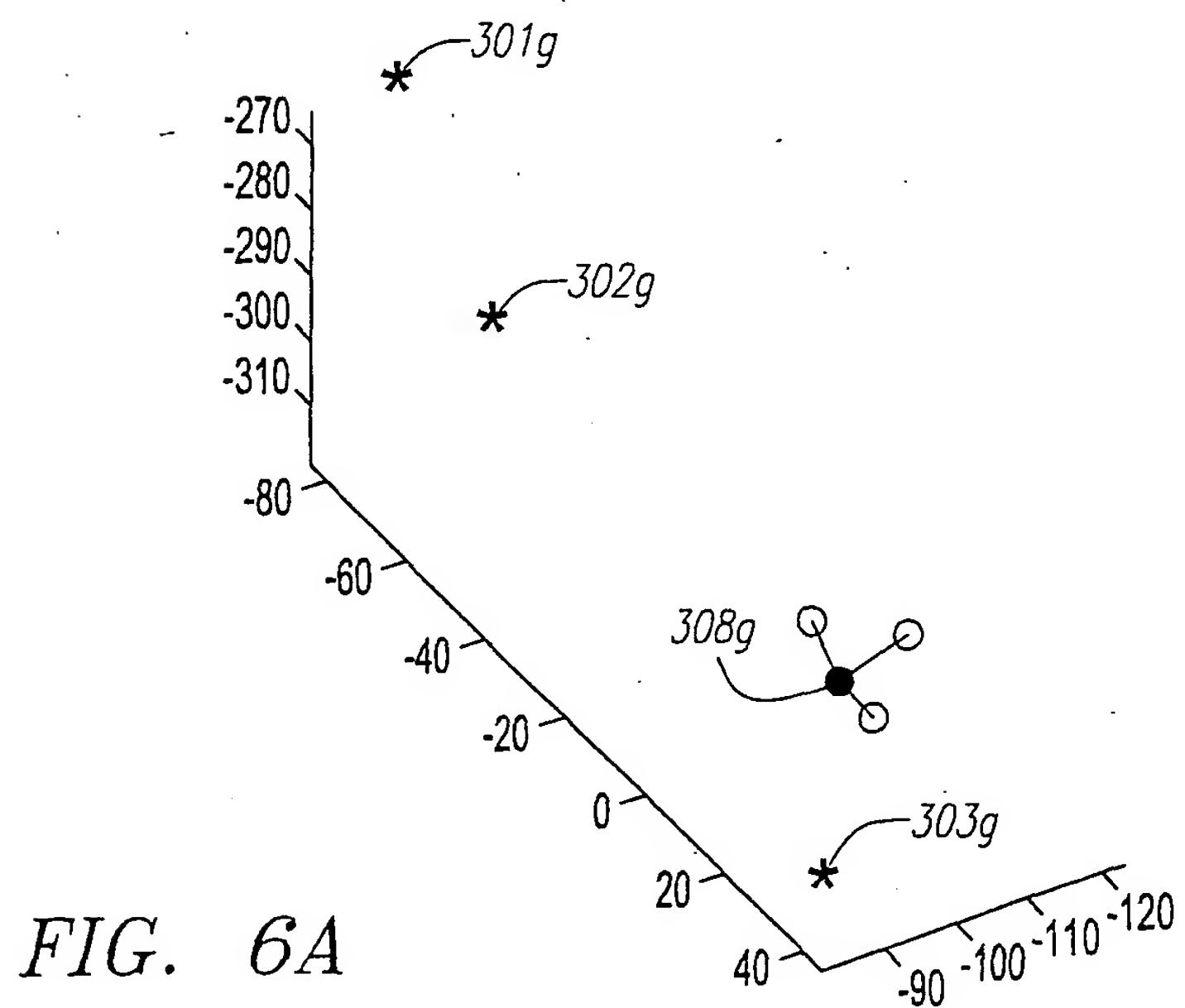
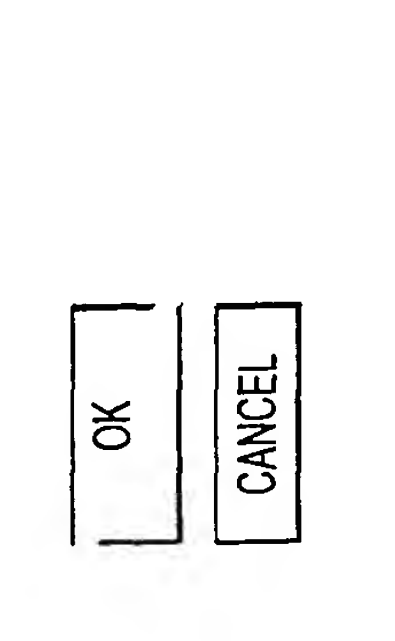


FIG. 6A



POINT	WORLD X	WORLD Y	WORLD Z	ERROR	DISTANCE	CamO X	CamO Y	Cam1 Y	Cam1 Y
1	25.403	-88.666	-273.087	0.111	0.000	242.515	645.011	207.000	604.248
2	25.721	-69.464	-298.941	0.029	0.000	241.496	693.577	217.137	651.683
3	9.897	-87.512	-272.644	0.030	0.000	268.582	644.080	232.530	601.725
4	9.769	-67.875	-298.553	0.070	0.000	268.638	692.660	243.845	649.186
5	-5.735	-87.007	-272.220	0.023	0.000	294.857	642.971	257.675	599.105
6	-6.311	-67.238	-298.038	0.143	0.000	296.011	691.479	269.969	645.958
7	-21.271	-86.103	-271.525	0.006	0.000	320.897	641.474	282.607	596.242
8	-22.270	-66.534	-297.401	0.038	0.000	323.118	689.855	295.663	642.865
9	-36.700	-85.210	-270.598	0.143	0.000	346.708	639.492	307.112	593.156
10	-38.391	-66.149	-296.520	0.132	0.000	350.431	687.885	321.133	639.137
11	-52.402	-84.929	-269.717	0.114	0.000	372.918	637.555	331.442	589.850
12	-54.388	-65.649	-295.440	0.133	0.000	377.461	685.556	346.190	635.256
13	57.162	34.188	-312.472	0.108	0.000	174.069	756.568	218.724	713.629
14	39.036	35.111	-312.274	0.148	0.000	207.939	755.624	251.265	710.126
15	20.973	36.864	-311.607	0.131	0.000	241.528	754.119	283.744	706.195
16	2.772	37.989	-310.857	0.051	0.000	275.386	752.137	315.686	701.974
17	-15.330	39.292	-309.880	0.186	0.000	308.983	750.018	347.139	697.297
18	-33.449	40.473	-308.726	0.063	0.000	342.554	747.174	378.164	692.663
19	-132.128	-0.469	-314.181	0.027	0.000	517.000	735.500	506.250	672.250

FIG. 6B



TOE

CENTER

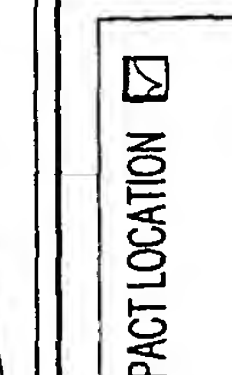
HEEL

SHAFT

OK

CANCEL

IMPACT LOCATION ON FACE ☒



HORIZONTAL INCREMENTAL LENGTH  mm

VERTICAL INCREMENTAL LENGTH  mm

FORCE IMPACT LOCATION ☒

POLYNOMIAL TO USE FOR CURVE FIT  MAX = 4 MIN = 1

DATA

☒ WRITE OUTPUT FILE

TEE BALL LOCATION

☒ FORCE TEE BALL LOCATION

X	Y	Z
<input type="text" value="-132.588"/>	<input type="text" value="1.078"/>	<input type="text" value="-314.279"/>

UNITS = mm

FIG. 7

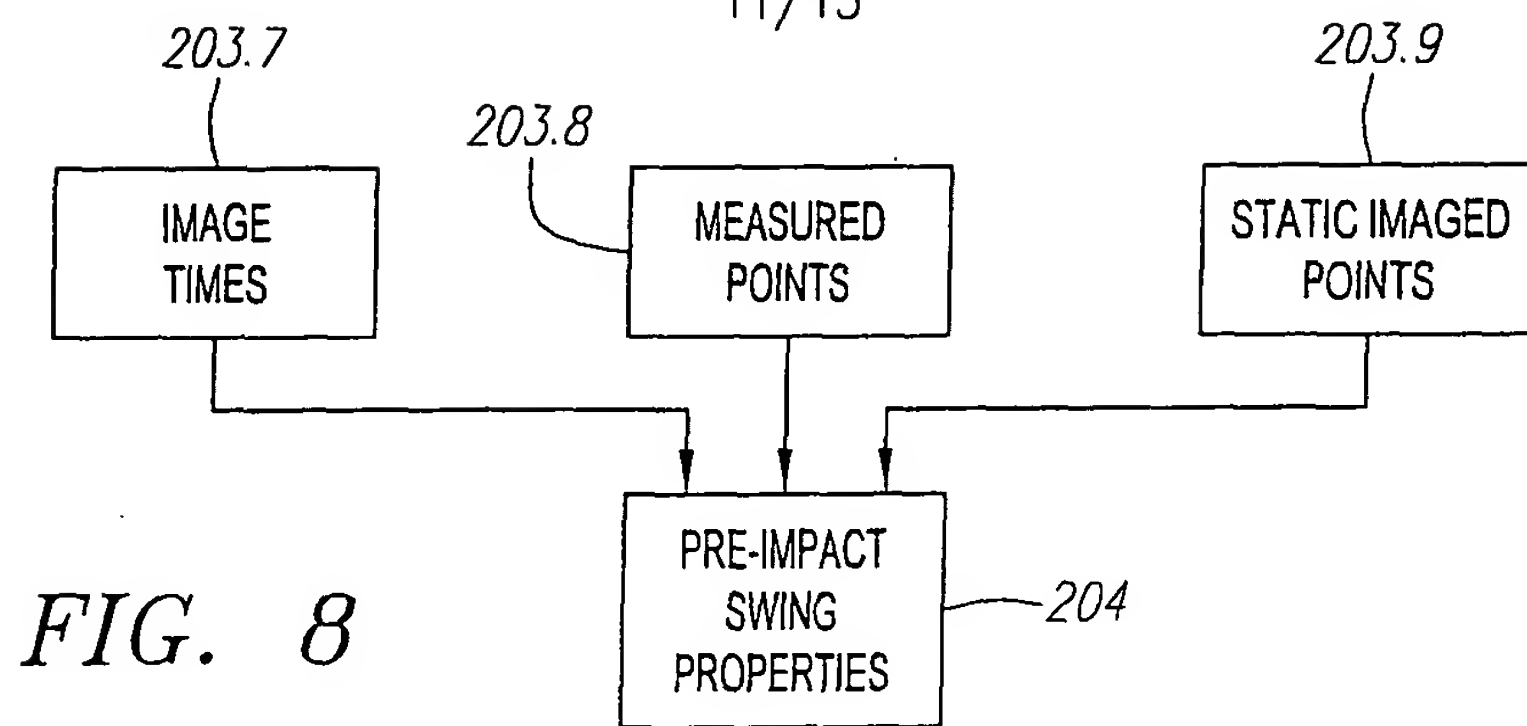


FIG. 9

	GOLFER A	GOLFER B	
1	100	100	USECS
2	474.64	445.24	
3	849.28	790.48	
4	1223.92	1135.72	
5	1598.56	1480.96	
6	1973.2	1826.2	

FIG. 10

POINT	GOLFER A			GOLFER B		
	x	y	z	x	y	z
1	22.5248	-83.9985	-277.294 mm	19.041	-72.461	-259.712
2	24.169	-65.4006	-303.476	22.4965	-55.2863	-286.794
3	7.19187	-82.9872	-277.522	4.01986	-70.4449	-259.675
4	8.42472	-64.3227	-303.821	7.01569	-53.2288	-286.847
5	-8.13186	-82.1665	-277.659	-10.9967	-69.261	-259.648
6	-7.22265	-63.5248	-303.832	-8.4661	-51.7105	-286.751
7	-23.3764	-81.5513	-277.808	-26.1186	-68.0642	-259.411
8	-23.0235	-62.4671	-303.799	-24.0434	-50.5302	-286.55
9	-38.7101	-81.1989	-277.632	-41.2492	-66.9375	-259.08
10	-38.7728	-62.1541	-303.773	-39.6559	-49.2957	-286.093
11	-53.8825	-80.338	-277.333	-56.2913	-65.3794	-258.417
12	-54.3404	-61.5229	-303.473	-55.2933	-48.2721	-285.617
13	55.757	37.5722	-317.082	52.9912	47.9439	-304.485
14	38.0195	39.5086	-317.184	35.5873	50.1247	-304.708
15	20.3043	41.514	-317.408	18.3605	52.5852	-304.554
16	2.59074	42.9978	-317.464	0.955063	54.6563	-304.407
17	-15.4104	43.8896	-317.378	-16.5273	56.2923	-303.924
18	-33.2143	45.1303	-316.736	-33.9984	57.8887	-303.17
19(BALL)	-133.559	-3.897	-315.635	-133.559	-3.897	-315.635

203.9

STATIC IMAGE POINTS

GOLFER A				GOLFER B			
POINT	x	y	z		x	y	z
1	-86.2027	-59.7842	-288.178	mm	-86.2027	-59.7842	-288.178
2	-73.7585	-51.7931	-317.232		-73.7585	-51.7931	-317.232
3	16.84	7.93595	-341.742		16.84	7.93595	-341.742
4	-26.4742	4.66858	-370.935		-26.4742	4.66858	-370.935
5	-19.7858	3.87145	-343.333		-19.7858	3.87145	-343.333
6	-64.4634	-31.0241	-339.31		-64.4634	-31.0241	-339.31
7	-66.9001	-27.2861	-367.303		-66.9001	-27.2861	-367.303
8	-44.8512	-9.84895	-353.971		-44.8512	-9.84895	-353.971

FIG. 11

202

CLUB HEAD PROPERTIES

401	FACE PROPERTIES	STEEL	Ti	
	FACEANGLE	0	0	DEGREE
	FACEBOTTOMCENTER			
	x	-0.714	-0.795	INCH
	y	0.756	0.643	
	z	0.17	0.197	
	FACECENTER			
	x	0	0	
	y	0.756	0.643	
	z	0.949	1.21	
	BULGE	9.5	11	INCH
	ROLL	11	11	
402	MASS PROPERTIES			
	MASS	197	187	GRAM
	CGX	0.423	0.634	INCH
	CGY	0.664	0.574	
	CGZ	0.871	0.9899	
	MOIxx	1737	2291	GRAMCM2
	MOIyy	1378	1781	
	MOIzz	2337	2871	
	MOIxy	213	247	
	MOIxz	-18	-12	
	MOIyz	113	164	
403	COR	0.785	0.865	
404	LOFT	11	13	DEGREE
	LIE	55	55	
	HOSELHEIGHT	0	0	
	SPINCOR	0	0	

FIG. 12

204  
PRE-IMPACT  
SWING  
PROPERTIES

		GOLFER A	GOLFER B (AVERAGES)	
409	LINEAR VELOCITY			
	VX	-100.07	-107.35	MPH
	VY	-2.12	18.04	
	VZ	5.63	9.99	
410	ANGULAR VELOCITY			OPTIONAL
411	ORIENTATION			
	FACE LOFT VECTOR			
	x	0.3251	0.27673	
	y	-0.07685	-0.03143	
	z	0.942547	0.96043	
	FACE LIE VECTOR			
	x	0.08157	0.08518	
	y	0.9953	0.99633	
	z	0.05302	0.00806	
	FACE NORMAL VECTOR			
	x	-0.94215	-0.95716	
	y	0.05965	0.07958	
	z	0.32984	0.2784	
	SHAFT VECTOR			
	x	-0.05612	-0.01957	
	y	0.57527	0.500194	
	z	-0.81603	-0.8657	
412	IMPACT LOCATION			
	x	0.21	-0.38	INCH
	y	0.41	-0.16	

FIG. 13

206  
GOLF BALL  
PROPERTIES

		TWO PIECE	THREE PIECE	
405	MASS	45.387	45.23	GRAM
406	RADIUS			
	DIAMETER	1.68	1.678	INCH
407	MOMENT	1.34E-03	1.04E-03	0INCHS2
408	COR	0.759	0.7455	

FIG. 14

210 BALL LAUNCH PARAMETERS		POSSIBLE LAUNCH PARAMETERS							
		GOLFER A STEEL/2PC	STEEL/3PC	Ti/2PC	Ti/3PC	GOLFER B STEEL/2PC	STEEL/3PC	Ti/2PC	Ti/3PC
416	BALL LINEAR VELOCITY	138.3	137	141.2	140.3	155.5	154.5	160.8	160
	VX	132.6	131.2	134	132.9	152.8	151.7	157	156
	VY	3.01	3.11	3.26	3.37	0.55	0.62	0.79	0.93
	VZ	39.2	39.5	44.4	44.9	28.9	29.5	34.8	35.4
417	BALL ANGULAR VELOCITY	2512	2667	2640	2910	2820	3080	2996	3280
418	LAUNCH ANGLE	16.5	16.8	18.4	18.7	10.7	11	12.5	12.8
419	SIDE ANGLE	4.4	4.5	4.2	4.3	1.1	1.2	1.3	1.5
420	BALL SPEED	138.3	137	141.2	140.3	155.5	154.5	160.8	160
421	SPIN	2512	2667	2640	2910	2820	3080	2996	3280
422	SPIN AXIS	20.784	20.724	19.172	19.089	17.56	17.436	18.845	18.705

FIG. 15

214	ATMOSPHERIC CONDITIONS	NICE			COLD		
		TEMP		72		43	F
		WIND		0		9	MPH
				0		90	DIRECTION
	HUMIDITY			50		76	PERCENT
	PRESSURE			29.92		30.33	INCHES

FIG. 16

PREDICTED  
PERFORMANCE

218

PLAYER WEATHER DRIVER BALL	GOLFER A NICE STEEL 2 PIECE	NICE STEEL 3 PIECE	COLD STEEL 2 PIECE	COLD STEEL 3 PIECE	NICE Ti 2 PIECE	NICE Ti 3 PIECE	COLD Ti 2 PIECE	COLD Ti 3 PIECE	YARDS
422 TOTAL DISTANCE	237	235	232	230	239	234	236	232	
423 TOTAL DISPERSION	-159	-160	-114	-113	-157	-158	-111	-112	FEET
424 TRAJECTORY SHAPE	(GRAPH)	(GRAPH)	(GRAPH)	(GRAPH)	(GRAPH)	(GRAPH)	(GRAPH)	(GRAPH)	
424 TRAJECTORY SHAPE VERTICAL	88	90	87	87	110	115	108	112	FEET
HORIZONTAL	27	26	14	13	26	26	13	13	FEET

15/15

PLAYER WEATHER DRIVER BALL	GOLFER B NICE STEEL 2 PIECE	NICE STEEL 3 PIECE	COLD STEEL 2 PIECE	COLD STEEL 3 PIECE	NICE Ti 2 PIECE	NICE Ti 3 PIECE	COLD Ti 2 PIECE	COLD Ti 3 PIECE	YARDS
422 TOTAL DISTANCE	253	254	259	258	261	257	258	255	
423 TOTAL DISPERSION	-116	-118	-76	-75	-139	-145	-91	-96	FEET
424 TRAJECTORY SHAPE	(GRAPH)	(GRAPH)	(GRAPH)	(GRAPH)	(GRAPH)	(GRAPH)	(GRAPH)	(GRAPH)	
424 TRAJECTORY SHAPE VERTICAL	77	79	75	76	101	107	98	104	FEET
HORIZONTAL	27	27	15	14	33	33	18	18	FEET

FIG. 17